A Process to Create High Optical Transparent 2D Electronic Conducting System

A new fabrication process creates highly transparent, electrically conductive films using silver nanowires bonded to a polycrystalline graphene sheet for improved performance in transparent electronics.

Transparent electronics are rapidly becoming integrated in commercial electronics and concept devices, creating new solar cells, touchscreens, and displays. Improved performance and power usage in these transparent technologies will open the door for devices with improved performance and portability.

Researchers at Purdue University have developed a new fabrication process for creating highly transparent, electrically conductive films. Silver nanowires are bonded to a polycrystalline graphene sheet, creating a film that has 90 percent optical transmittance with a resistance of only 10 to 20 ohms per square.

Advantages:

-Film is highly transparent with 90 percent optical transmittance

-Low electrical resistance

Potential Applications:

-Electronics Industry

-Graphene Technologies

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